

BOYKOVA, O.S., metodist lechechnoy fizicheskoy kul'tury; BORTFEL'D, S.A.,
kand. ped. nauk; GANDEL'SMAN, A.B., prof., doktor med. nauk;
GOLOVINSKAYA, N.V., kand. biol. nauk; GONCHAROVA, M.N., prof.,
doktor med. nauk; MIRZOYEVA, I.I., red.; KHARASH, G.A., tekhn.
red.

[Exercise therapy in the pediatric orthopedic clinic] Lecheb-
naia fizicheskaia kul'tura v detskoj ortopedicheskoi klinike.
Leningrad, Medgiz, 1961. 191 p. (MIRA 15:4)
(EXERCISE THERAPY) (ORTHOPEDIC NURSING)

GOLOVINSKAYA, N. V.; BOYKOVA, O. S.; ZEN'KEVICH, K. F.

Electromyographic studies of incorrect habitual postures which favor the formation of scoliosis in children. Trudy LSGMI 64: 67-78 '61. (MIRA 15:7)

1. Otdeleniye lechebnoy fizicheskoy kul'tury i fiziologicheskaya laboratoriya Gosudarstvennogo nauchno-issledovatel'skogo detskogo ortopedicheskogo instituta imeni G. I. Turnera. Zav. laboratoriyyey - prof. Yu. M. Uflyand; rukovoditel' otdeleniya - starshiy nauchnyy sotrudnik N. V. Golovinskaya.

(ELECTROMYOGRAPHY) (POSTURE)
(SPINE—ABNORMALITIES AND DEFORMITIES)

LYANDRES, Z.A., prof.; BORTFEL'D, S.A., starshiy nauchnyy sotrudnik;
GOLOVINSKAYA, N.V., starshiy nauchnyy sotrudnik;
ZAKREVSKIY, L.Z., starshiy nauchnyy sotrudnik; ZAYDEL', O.P.,
nauchnyy sotrudnik; MANUKHINA, Z.P., nauchnyy sotrudnik;
BOYKOVA, O.S., nauchnyy sotrudnik

Concepts of the abnormalities of posture and scoliosis in
children. Ortop., travm. i protez. 25 no.11:81-85 N '64.

(MIRA 18:11)

1. Iz Detskogo ortopedicheskogo Instituta imeni G.I. Turnera
(dir. - prof. M.N. Goncharova), Leningrad. Adres avtorov:
Leningrad M-136, Lakhtinskaya ul., d.10/12, Detskiy ortopedi-
cheskiy institut Turnera. Submitted January 27, 1964.

L 11815-66 ENT(m)/EMP(t)/EMP(l), IWP(c) JD

ACC NR: AP6001632

SOURCE CODE: UR/0051/65/019/006/0843/0850

AUTHORS: Boykova, R. F.; Fradkin, E. Ye.

ORG: None

TITLE: Calculation of the cross section of electronic excitation of energy levels of inert gases

SOURCE: Optika i spektroskopiya, v. 19, no. 6, 1965, 843-850

TOPIC TAGS: laser theory, optic transition, wave function, excitation cross section

ABSTRACT: A procedure is proposed for calculating the excitation cross sections of individual energy levels of inert gases, using the Born-Oppenheimer method with atomic functions in the total angular momentum representation. These calculations are of interest in connection with contemporary experiments on the production or inverse populations in gas lasers. The theoretical formulas are derived and the numerical calculations are made for the excitation of the 3p level configuration of neon from the ground state. Plots and tables of the results are presented. The results lead to the following conclusions: 1) the cross sections for the excitation of a group of closely lying energy levels

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UDC: 539.186.2.001.1

L 11815-66

ACC NR: AP6001632

of one electronic configuration can differ in magnitude and in the energy dependence to a considerable degree. 2) Since the atomic wave functions are usually calculated in the central-field approximation, the type of the vector coupling of the corresponding state of the atom must be taken into account in calculating the excitation cross sections of each individual level. 3) To obtain consistent results by the Born and by the Born-Oppenheimer methods, it is necessary to employ good wave functions. Authors thank V. I. Ochkur for interest in the work and for discussions. Orig. art. has: 2 figures and 1 table and 15 formulas.

[02]

SUB CODE: 20/ SUBM DATE: 01Jul64/ ORIG REF: 005/ OTH REF: 006/
ATT PRESS: 4182



2/2

L 12852-66 EWT(1) / IJP(c) GG

ACC NR: AP6002293 44,55	SOURCE CODE: UR/0141/65/008/006/1089/1099 44,55
AUTHOR: Boykova, R. F.; Fradkin, E. Ye. 44,55	
ORG: Leningrad State University (Leningradskiy gosudarstvenny universitet) 21, 44, 55	33
TITLE: Propagation of strong monochromatic radiation in media having different types of spectral-line broadening 21, 44, 55	B
SOURCE: IVUZ. Radiofizika, v. 8, no. 6, 1965, 1089-1099	
TOPIC TAGS: monochromatic radiation, dielectric property	
ABSTRACT: Propagation of stationary monochromatic radiation in a semi-infinite dielectric is considered theoretically. Equations describing a nonlinear law of absorption (or amplification) in the dielectric are set up, as well as a formula for macroscopic polarizability of a molecule. The polarizability of the dielectric medium with uniform and nonuniform spectral-line broadening is explored. Differential and integral absorption laws are formulated for several types of spectral-line broadening. It was found that: 1) Nonlinear effects increase the range of light penetration as compared to that estimated from the Hugger law; 2) nonuniform spectral-line broadening reduces the role of nonlinear effects in the absorption as compared to the case of uniform broadening for the same values of parameter βS_0 (nonlinearity parameter and intensity of radiation); 3) absorption falls off and the light penetration range increases with the increasing mismatch $\Delta\omega$. Orig.art. has: 3 figures and 50 formulas.	[03]
SUB CODE: 20 / SUBM DATE: 08May65 / ORIG REF: 009 / OTH REF: 002 / ATD PRESS: 418/ Card 1/1 HW	
	UDC: 621.371.132

27.2400 also 2209

32756
S/205/61/001/006/016/022
D243/D305

AUTHORS: Ivanitskaya, A.F., and Boykova, V.I.

TITLE: The effect of neutron radiation on the spleen of the white mouse

PERIODICAL: Radiobiologiya, v. 1, no. 6, 1961, 913 - 918

TEXT: It is stated that there are few data on the effect of neutron radiation on isolated organs. Preliminary experiments showed that the absolute lethal dose for white mice was 500 - 600 rads at a duration of 13.7 and 16.4 mins. respectively. 150 white mice were used, of 18 - 20 g weight, and given a 600 rads dose from an MTP -1000 (ITR-1000) reactor. The animals were placed in special containers of organic glass with four individual nests. Death occurred on average after 3.1 days. Micro- and macroscopic spleen changes appear rapidly, the organ diminishing in size within 24 hours and being 3 - 3.5 times smaller than normal at death. To study the microscopic changes the animals were decapitated and splenic sections fixed 1, 4, 6 hours and 1, 2, and 3 days after irradiation, using

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The effect of neutron radiation on ... D243/D305

the prescription of Tsenker and San-Feliche and staining with haemalum and eosin by Feulgen and Romanovskiy's method. The average cell number, and the number of lymphocytes and mature granulocytes were estimated and plotted graphically. Spleen changes after neutron radiation are very similar to those provoked by X- and γ -rays, and are manifest as the occurrence and development of tissue breakdown, in pathological changes in various cell groups (hypersegmentation and swelling of the nuclei of the granular forms, pyknosis and karyoreksis of the lymphoid elements, etc.), in the diminution of the number of free blood corpuscles and in emptying of the organ. After neutron radiation, an increased number of mitotic cells are found in the reticular stroma, together with mitotic megakaryocytes and plasma cells. It is suggested that the haemopoietic tissue is less affected by neutron radiation than by equivalent doses of X- and γ -radiation. The authors express thanks to B.A. Levjn, Scientific Assistant at the Institut atomnoy energii Akademii nauk SSSR (Atomic Energy Institute AS USSR) for his assistance with the reactor. There are 4 figures and 15 references: 6 Soviet-bloc and 9 non-Soviet-bloc. The 4 most recent references to the English-lan-

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4

32756
S/205/61/001/006/016/022

The effect of neutron radiation on ... D243/D305

guage publications read as follows: M. Swift, S. Taketa, E. Tochilin and B. Shumway, Radiation Res., 9, 191, 1958; J.L. Bateman, V.P. Bond and E. Stickley, Radiologie, 74, 90, 1960; V.P. Bond, R.E. Carter, J.S. Robertson, P.H. Seymour and R.E. Hetvher, Radiation Res., 4, 129, 1959; H.H. Vogel and D.L. Jordan, Radiation Res., 9, 199, 1958.

ASSOCIATION: Institut morfologii zhivotnykh im. A.N. Severtsova AN USSR, Moskva (Institute of Animal Morphology im. A.N. Severtsov, AS USSR, Moscow) *X*

SUBMITTED: April 25, 1961

Card 3/3

BOYKOVA, Y., N., inzh.

The engine building of the Bratsk Hydroelectric Power Station.
Gidr.stroi. 32 no.9:7-12 S '62. (MIRA 16:2)
(Bratsk Hydroelectric Power Station)

Boyle, G.C.

RELEASED AND EXEMPTED UNDER

29

Process of preparing sulfosyntan from the waste products of the naphtha industry at Groznyi. A. F. Krasynkov, R. Bulakhova, and I. A. Kalita. *J. Applied Chem. (U.S.S.R.)* 19, 322-8(1946). -A synthetic tanning substance (sulfosyntan) was obtained under lab. conditions from the waste product of the naphtha industry (paraffinic acid sludge). The prep., is very simple, employs simple app., and results in a very cheap substance of quality equal to that of the sulfoanthracene used in the U.S.S.R. for tanning purposes. The method of binding the suloparaffin to the leather fiber with an iron sulfate

solt, is a chemitech. improvement. Optimal tanning conditions with suloparaffin followed by treatment of the leather with iron sulfate soln. were deid. to be pH 3 for the liquid and pH 3-3.2 for the binding bath.

A. B. Karr

ASIN-VLA METALLURGICAL LITERATURE CLASSIFICATION

130411 SV-AV174

82-112-1407

130411 SV-AV179

Antioxidizing Properties of Some
Pyrazoline Derivatives

86315
S/152/60/003/003/002/003
B023/B060

Derivatives of phenyl thiocarbamides of various pyrazolines were obtained by the action of phenyl isothiocyanate upon these pyrazolines (Ref. 5). In a similar manner, the following compounds were obtained from the corresponding pyrazolines: 1-carbamido-3-phenyl pyrazoline and 1-phenyl carbamido-3-phenyl-4-ethyl pyrazoline (Ref. 2). 3-amino-1-phenyl pyrazoline was synthesized from acrylonitrile and phenyl hydrazine (Ref. 6). 1,3,5-triphenyl pyrazoline was obtained by interaction of benzal acetophenone and phenyl hydrazine (Ref. 7). The efficiency of the preparations examined was estimated by comparing their inhibiting effect with the effect of para-oxy diphenyl amine, which was taken as a standard, as well as with the effect of 2,6-ditertiary butyl-4-methyl phenol. Two samples of motor fuels A and B were taken, the properties of which are given in Table 1. Sample A was prepared by intermixing equal amounts of fresh distillate of thermocracking and of the benzene-ligroin fraction. Sample B was prepared by intermixing the same amounts in a ratio of 30 : 70. Both samples were inhibited by various additions on the day of their preparation. The additions were allowed to dissolve in the motor fuels by being added as benzene solutions. Benzene was taken in an amount of ~ 0.1% of the fuel volume. The effect of stability of samples A and B

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86146

Antioxidizing Properties of Some
Pyrazoline Derivatives

S/152/60/000/003/002/003
B023/B060

was examined first. For this purpose the authors studied the inhibited motor fuel for its stability to oxidation by determining the induction period on the basis of GOST 4039-48 (GOST 4039-48) within 6 h. The content of potential resins in the motor fuel was determined next. Results show that some pyrazoline derivative samples have a considerable inhibiting effect. The best results were yielded by the use of 1-phenyl thiocarbamido-3,5,5-trimethyl pyrazoline. In the sample inhibited with this substance, the resin formation appeared only after two months, while resins in a noninhibited sample increased with uninterrupted intensity throughout the whole storage time. There are 3 tables and 7 references: 5 Soviet, 1 US, and 1 German.

X

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University imeni M. V. Lomonosov) GrozNII
(Groznyy Petroleum Institute)

SUBMITTED: September 3, 1959

Card 3/3

BOYM, A., inzhener; MENDELEVICH, Ya., inzhener,

Intensity of radio noise caused by automobiles. Avt.transp. 35
no.1:36 Ja '57. (MLRA 10:3)

1. Nauchno-issledovatel'skiy institut avtopriborov.
(Radio—Noise)

BOYM, A. A.

Dissertation: "Stresses Around Mine Workings of Trapezoidal, Arched, and Elliptical Form." Cand Tech Sci, L'vov Polytechnic Inst, L'vov, 1954. Referativnyy Zhurnal--Mekhanika, Moscow, Jul 54.

SO: SUM No. 356, 25 Jan 1955

SOV/124-57-4-4577

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 4, p 100 (USSR)

AUTHOR: Boym, A. A.

TITLE: On Stresses in a Ponderable Half-plane Weakened by an Arched
Opening (O napryazheniyakh v vesomoy poluploskosti, oslabленной
svodchatym otverstiyem)

PERIODICAL: Dokl. L'vovsk. politekhn. in-ta, 1955, Vol 1, Nr 2, pp 64-68

ABSTRACT: The stress distribution in an infinite plane field with an opening is determined under conditions in which the stresses at infinity are, respectively, equal to the weight of the overlying soil strata and to the magnitude of the lateral thrust. The problem is solved by the method of the plane problem of the theory of elasticity with the aid of functions of complex variables and conformal representation. Graphs of the stress distribution along the contour of the opening are given for two types of conditions prevailing at the contour: a) The contour is free of any external forces; b) a perfectly rigid ring is brazed in to serve as a rigid stiffener.

A. B. Morgayevskiy

Card 1/1

SOV/124-57-4-4578

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 4, p 100 (USSR)

AUTHOR: Boym, A. A.

TITLE: On the Stresses Prevailing in an Infinite Compressed Plate That is Weakened by an Arched Opening, the Edge of Which is Stiffened by an Elastic Ring (O napryazheniyakh v beskonechnoy szhatoy plastinke, oslabленной сводчатым отверстием, краем которого подкреплен упругим кольцом)

PERIODICAL: Dokl. L'vovsk. politekhn. in-ta, 1955, Vol 1, Nr 2, pp 69-72

ABSTRACT: The setup of the problem and the methodology employed in its solution are those disclosed in an earlier paper (see RZhMekh, 1957, Nr 4, abstract 4577). The problem is solved for the case when an elastic ring consisting of a different material is brazed into the opening. Graphs of the stress distribution along the contour of the opening are adduced.

A. B. Morgayevskiy

Card 1/1

DY
BOYM, G.A. (L'viv)

Stresses in semi-plane sheets weakened by arched openings. Prikl.
mekh. 2 no.4:388-391 '56. (MLRA 10:3)

1. L'viv's'kiy politekhnichniy institut.
(Elastic plates and shells)

BOYM, A.A. [Boim, O.A.] (L'viv)

Stresses in infinite compressed plates weakened by trapezoidal
or arched holes having edges reinforced by elastic rings [in
Ukrainian with summary in Russian]. Prykl. mekh. 3 no. 4:471-476
'57. (MIRA 11:2)

1. L'vivskiy politekhnichniy institut.
(Elastic plates and shells)

BOYM, Anatoliy Borisovich,; MENDELEVICH, Yakov Ayzikovich,; SIMONOV,
Lev Antonovich,; SHITOV, B.I., retsenzent,; GOL'DBERG, G.I., red.;
NAKHIMSON, V.A., red. izd-va,; EL'KIND, V.D., tekhn. red.

[Controlling radio interference due to automobiles, motorcycles,
and tractors] Podavlenie radiopomekh, sozdavaemykh avtomobiliami,
mototsiklami i traktorami. Moskva, Gos. nauchno-tekhn. izd-vo
mashinostroit. lit-ry, 1958. 94 p. (MIRA 11:8)
(Radio--Interference)

27176
S/057/61/031/009/016/019
B104/B102

26.2322

AUTHORS: Boym, A. B., and Reykhrudel', E. M.

TITLE: Initial stages of a pulsed discharge at low pressures

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 9, 1961, 1127-1134

TEXT: The authors studied the ignition of a pulsed discharge in a cold-cathode tube at initial pressures of 10^{-4} - 10^{-6} mm Hg and initial voltages of 30-60 kv. They conducted experiments to study the possibility of prolonging considerably the time τ necessary for the development of a discharge. They determined the parameters of the electron beam and the duration of the electron-optical stage of the pulsed discharge by observing the time dependence of current and voltage by means of oscilloscopes, and by measuring the cross section of the beam. The cross section was determined by measuring the dimensions of the X-ray source on the anode. Fig. 1 shows a diagram of the experimental arrangement. From extensive experimental material, the authors conclude: (1) In the pulsed discharge in a low-pressure tube featuring a cold cathode with ignition device, the development of a discharge is delayed under certain conditions. The delay

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S/057/61/031/009/016/019

B104/B102

Initial stages of a pulsed ...

depends on the parameters of the discharge and the degree of electrode degasification; ignition starts when the initial voltage lies below the ignition voltage. (2) The delay of ignition corresponds to the stage of pre-discharge pulses preceding the stage of the focused gas beam. The time of this preliminary stage of discharge with a given R_{II} (Fig. 1) can be varied in a wide range by regulating the discharge capacitance when the voltage applied lies below the ignition voltage. (3) This delay may be used for increasing the lifetime of the electron beam in the pulsed discharge from 1 μ sec up to some milliseconds. (4) The current amplitude in the preliminary stage of discharge can be regulated by proper section of the resistance R_{II} ; here, the duration of this stage also changes. (5) The time development of a discharge also decreases with increasing pressure. There are 5 figures and 9 references: 8 Soviet and 1 non-Soviet.

ASSOCIATION: Fizicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta
(Division of Physics of Moscow State University)

SUBMITTED: November 18, 1960

Fig. 1. Diagram of the experimental arrangement. Legend: (1) Blocks for starting the scanning, (2) scanning generators.
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L 18486-63

EMT(1)/BDS/ES(w)-2

APPFC/ASD/ESD-3/IJP(C)/SSD

Pab-4 RH
S/0037/63/033/003/0996/1006

ACCESSION NR: AP3003513

AUTHOR: Boym, A.B.; Reykhrudel', E.M.

TITLE: Cold cathode electron gun with keep-alive electrodes

SOURCE: Zhurnal tehnicheskoy fiziki, v.33, no.3, 1958, 995-1006

TOPIC TAGS: electron gun , pulsed electron beam

ABSTRACT: The pulsed operation of cold cathode electron guns with keep-alive electrodes was investigated under a variety of conditions with the purpose of obtaining large electron currents in a field free drift region beyond the anode. Two discharge tubes were investigated. One employed a Heil gun (O.Heil and J.J.Ebers, Proc IRE, 38, 345, 1950) with a 9 mm opening in the anode and a movable collector. The other tube employed a Pierce gun described by S.N.Tretyakov (Radiotekhnika i elektronika, 2, 7, 925, 1957) with a 10 mm aperture in the anode and a fixed collector located 22 mm beyond the anode. This tube was investigated both with and without magnetic focusing. Oscillograms of the anode and collector currents and the anode potential were obtained by a technique described elsewhere by the present authors (ZhTF, 31, 9 1127, 1951). The use of magnetic focusing increased the total conductivity of the

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64

L 16486-63

ACCESSION NR: AP3005513

Pierce gun in the predischarge surge phase by more than an order of magnitude over the value obtained by electrostatic focusing alone. Gases emitted by the electrodes under the influence of the koop-alive discharge produced a focusing effect which increased the current in the drift region over the space charge limited value by tens of times in the case of the Heil gun and by hundreds of times in the case of the Pierce gun with magnetic focusing. This gas focusing effect was less marked when the electrodes were first thoroughly outgassed. Nine oscillograms are reproduced in the text. Orig.art.has: 3 formulas and 5 figures.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet, Fizicheskiy fakul'tet(Physics Department, Moscow State University)

SUBMITTED: 11Jun63

DATE ACQ: 06Sep63

ENCL: 00

SUB CODE: GE, SD

NO REF SCV: 012

OTHER: 007

Card 2/2

BOYM, A.B. ; REYKIRUDEL', E.M.

Cold cathode with a trigger in an electron gun. Zhur. tekhn. fiz.
33 no.8:996-1006 Ag '63. (MIRA 16:11)

1. Moskovskiy gosudarstvennyy universitet, fizicheskiy fakul'tet.

MAGNITSKIY, Vladimir Aleksandrovich, prof., doktor tekhn.nauk; FAYN-
BOYM, I.B., red.; MAZAROWA,A.S., tekhn.red.

[Internal structure of the earth] Vnutrennee stroenie Zemli.
Moskva, Izd-vo "Znanie," 1961. 38 p. (Vsesciuznoe obshche-
stvo po rasprostraneniu politicheskikh i nauchnykh znanii.
Ser.12, Geologiya i geografiia, no.7) (MIRA 14:5)
(Earth--Internal structure)

L 10489-63

EWT(1)/ENG(k)/BDS/ES(w)-2--AFFTC/ASD/ESD-3/SSD-Pz-4/Pab-4-

AT/LJP(C)

ACCESSION NR: AP3000567

S/0109/63/003/005/0845/0851

72

71

AUTHOR: Boym, A. B.; Reykhruhel', E. M.TITLE: The operation of a cold multicathode with ignition under pulse conditions

SOURCE: Radiotekhnika i elektronika, v. 8, no. 5, 1963, 845-851

TOPIC TAGS: cold multicathode, high-voltage pulse, vacuum gap, total cathode current, emitting surface, multicathode

ABSTRACT: The technique of delaying the ignition of high-voltage pulse discharge in a high vacuum is utilized in the development of a cold multicathode. Two experimental tubes, one with four and the other with eleven igniting electrodes, were investigated. The tubes consisted of an anode, a multicathode, and high-voltage resistors. The multicathode consisted of a cathode and igniting electrodes isolated from the cathode by vacuum gaps and from each other by means of a ceramic lattice. The high-voltage resistors were connected in series with the corresponding electrodes. Sections of high-voltage cable with a resistance of 2 kohm were used as resistors. The pressure in the tube was maintained between 5×10^{-5} and 5×10^{-6} mm Hg. In the tube with four igniting electrodes, an increase in the number of igniting gaps caused an increase in the total cathode

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ACCESSION NR: AP3000567

current, which is directly proportional to the numbers of gaps. When the initial voltage was 30 kv, the cathode current was equal to 15, 30, 45, and 60 amp for one, two, three, and four gaps, respectively. A simultaneous breakdown in all gaps was observed without any noticeable ignition delay in individual gaps. A similar phenomenon was observed in the tube containing eleven electrodes. A cathode current of about 160 amp with a pulse duration of 0.3 to 0.4 sec was observed for all eleven gaps. The investigations showed that the application of series resistors permits 1) an increase in the emitting surface of a cold cathode resulting in a higher electron current with a large pulse duration; 2) the creation of electron streams with the required cross section; and 3) the obtaining of currents with low-velocity dispersion of electrons and large current amplitudes. Orig. art. has: 6 figures and 1 formula.

ASSOCIATION: Fizicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta im. M. B. Lomonosova (Faculty of Physics, Moscow State University)

SUBMITTED: 19Mar62 DATE ACQ: 30May63 ENCL: 00
SUB CODE: PH NO REF Sov: 005 OTHER: 001
ss/901
rd 12/2

BOYMEL'-MEKENITSKAYA, L. I. Cand Tech Sci -- (diss) "Study of the ^{state} ~~filmy appearance~~ of bound water in petroleum collectors." Mos, 1957. 12 pp 22 cm. (Min of Higher Education USSR. Mos Order of Labor Red Banner Petroleum Inst im Academician I.M. Gubkin). 110 copies. (KL, 15-57, 105)

L 8982-65 EWT(1)/EW(2)(k)/EWT(3)/EW(4)/EW(5)/EW(6)
ESD(gs)/AFSTR/AFWL/SSD/RAEM(t)/ESD(t) AT/JD
ACCESSION NR: AP4045740

Pz-6 IJP(c)/AS(mp)-2/

G/0030/61/006/003/K169/K174

AUTHOR: Boyn, R.

B

TITLE: Extrinsic photoconductivity in CdS crystals

SOURCE: Physica status solidi, v. 6., no. 5, 1964, K169-K174

TOPIC TAGS: solid state physics, photoconductivity, extrinsic photoconductivity, cadmium sulfide, photoionization, photoexcitation

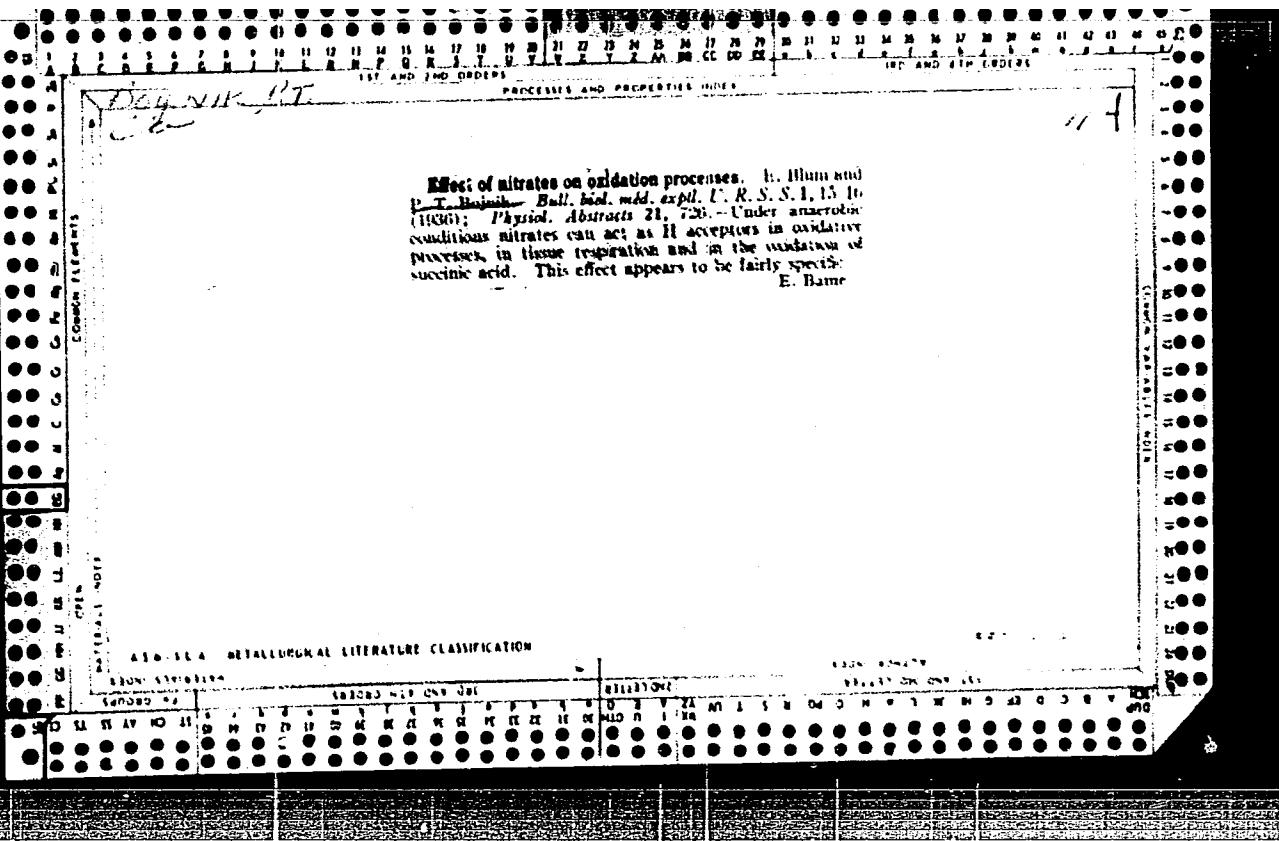
ABSTRACT: This article deals with photoconductivity due to photoexcitation of electrons from intrinsic lattice defects in CdS whose energy levels are filled with electrons by introduction of shallow donors. The investigated samples were plate-shaped single crystals about 100 microns thick prepared from high-purity CdS powder. Contacts were of gold produced from evaporation. The crystals were heat treated in Cd vapor at 600—700°C, leading to introduction of Cd interstitials and/or S vacancies acting as shallow donors. The concentration of excess Cd was reduced in controlled steps by annealing in vacuum at about 550°C to shift the Fermi level in controlled steps toward lower energies. The extrinsic photoconductivity was measured after each annealing step at 77K. Two figures show

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L 8982-65 ACCESSION NR: AP4045740			2
the spectral distribution of photoconductivity in the extrinsic region and the experimental rise curves in photon energy. The deduced capture cross-sections appeared to be associated with two observed energy levels ($2 \times 10^{-18} \text{ cm}^2$ for the 0.4-ev level and $3 \times 10^{-21} \text{ cm}^2$ for the 1.1-ev level). The small capture cross sections were ascribed to the centers leading to the observed levels being negatively charged or neutral in the unoccupied state; the 1.1-ev level may be related to "sensitizing centers" in CdS. Measurements of extrinsic photoconductivity at liquid-hydrogen temperature are in progress. "The author is indebted to Dr. E. Gutsche for critical discussions." Orig. art. has: 2 figures.			
ASSOCIATION: Physikalisches Institut der Humboldt-Universität zu Berlin (Physics Institute, Humboldt University)			
SUBMITTED: 11Aug64		ENCL: 00	
SUB CODE: EM, SS	NO REF Sov: 0001	OTHER: 008	
Card 2/2			

BOYNAR, Aleksey Osipovich, doktor meditsinskikh nauk, professor;
SHIK, M.M., pedaktor; ISLENT'YEVA, P.G., tekhnicheskiy redaktor.

[Significance of microelements in the organism of man and
animals] Znachenie mikroelementov v organizme cheloveka i
zhivotnykh. Moskva, Izd-vo "Znanie," 1955. 23 p. (Vsesoiuznoe
obshchestvo po rasprostraneniiu politicheskikh i nauchnykh
znanii. Ser. 3, no.49) (MLRA 8:12)
(Biochemistry)



BOYNIK, P.T.

Changes in the higher nervous activity in dogs during the interaction of retarding and differentiating inhibition from the same and from different analysors [with summary in English]. Zhur.vys.nevr. deiat 8 no.6:879-886 N-D '58 (MIRA 12:1)

1. Laboratory of Physiology and Pathology of Higher Nervous Activity, Institute of Normal and Pathological Physiology, USSR Academy of Medical Sciences, Moscow.
(REFLEX, CONDITIONED,

higher nerv. activity in interaction of retarding & differentiating inhib. prod. from single & different analyzers in dogs (Rus))

BOYNIK, P. T.: Master Biol Sci (diss) -- "Changes in higher nervous activity of dogs with the interaction of delaying and differentiating inhibition". Moscow, 1959. 16 pp (Acad Med Sci USSR), 225 copies (KL, No 15, 1959, 115)

PLETSITYY, D.F.; MONAYENKOV, A.M.; OSTROVSKIY, Yu.B.; BOYNIK, P.T.

Immunogenesis and nonspecific factors of natural resistance.
Report No.1: Effect of active immunization on the amount of
lysozyme in animal saliva. Zhur.mikrobiol., epid.i immun. 33
no.8:112-117 Ag '62. (MIRA 15:10)

1. Iz Instituta normal'noy i patologicheskoy fiziologii AMN SSSR.
(VACCINATION) (LYSOZYME) (SALIVA)

GRISHKEVICH, V.M.; BIRGER, B.N.; BOYNIL, Ye.U.

Anaerobic phlegmon and gangrene of the scrotum. Vest. khir.
92 no.6:127-128 Je :64. (MIRA 18:5)

1. Iz Oshmyanskoy rayonnoy bol'nitsy (glavnnyy vrach - G. Zaboyev)
Grodnenskoy oblasti. Adres avtora: Oshmyany, Grodnenskoy oblasti,
rayonnaya bol'nitsa.

BOYNO-RODZEVICH, V. G.

PA 5/49T9

USSR/Academy of Sciences
Geography

May 48

"L. S. Berg's 'One Hundred Years of the All-Union
Geographical Society,'" V. G. Boyno-Rodzovich, $\frac{1}{2}$ p

"Priroda" No 5

Favorably reviews subject book, written to commem-
orate centennial of the Society. Published by Acad
Sci USSR, 1946, 264 pp, 5,000 copies printed, price
24 rubles.

5/49T9

SIDNEVA, K.M., kand. tekhn. nauk nauchnyy sotrudnik; YEREMINA, O.I.,
inzh., nauchnyy sotrudnik; BOYNO-RODZEVICH, V.P., inzh., nauchnyy
sotrudnik; PLENTSOVA, S.A., inzh., nauchnyy sotrudnik

Use of new types of dyes for wool dyeing. Tekst. prom. 23
no.10:18-21 0 '63. (MIRA 17:1)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov
i krasiteley (NIOPiK).

SIDNEVA, K.M., inzh.;nauchnyy sotrudnik; PLENTSOVA, S.A., inzh., nauchnyy
sotrudnik; BOYNO-RODZEVICH, V.P., inzh., nauchnyy sotrudnik

Effect of the pH of the dyebath on the mechanical strength of
dyed wool. Tekst. prom. 24 no.4:58-61 Ap '64. (MIR. 17:6)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov
i krasiteley.

SIDNEVA, K.M., nauchnyy sotrudnik, kand.tekhn.nauk; BOYNO-RODZEVICH, V.P., nauchnyy sotrudnik, inzh.; SIMANOVSKAYA, Ye.L., nauchnyy sotrudnik, inzh.; BEREZINA, V.A., starshiy nauchnyy sotrudnik

Wool dyeing with vat dyes in weakly-alkaline baths. Tekst.prom.
25 no.11:61-64 N '65. (MIRA 18:12)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov i krasiteley (for Sidneva, Boyno-Rodzevich, Simanovskaya).
2. TSentral'nyy nauchno-issledovatel'skiy institut shershtyanoy promyslennosti (for Berezina).

BOYNOV, B.M., inzh.

Vibration rollers. Mekh. stroi. 18 no.11:23-25 N '61,

(Rollers (Earthwork))

(MIRA 16:7)

BOYNOV, B.M., inzh.; BONDARENKO, V.I., inzh.

Special operations in construction of the Volga
Hydroelectric Power Station (22nd Congress of the CPSU).
Mont. i spets. rab. v stroi. 24 no.2:21-24 F '62. (MIRA 15:6)

1. Volgogradgidrostroy.
(Volga Hydroelectric Power Station (22d Congress of the CPSU))

BOYNOV, B.M., inzh.; BONDARENKO, V.I., inzh.

Experience with construction of industrial buildings on macroporous soil. Prom.stroi. 40 no.8:8-11 '62.
(Volgograd Province--Industrial buildings) (MIRA 15:11)
(Soil stabilization)

BOYNOV, B.M. (Volzhskiy); BONDARENKO, V.I. (Volzhskiy)

Construction of a hydroelectric power station on semi-crystalline soil. Osn., fund.i mekh.grun. 4 no.5:18-21 '62.

(Volga Hydroelectric Power Station (22nd Congress of the CPSU) -
Soil mechanics) (MIRA 15:12)

BOYNOVICH, Don Iosifovich; ISAKOV, Vasiliy Petrovich; PISHNOV,
Semen Elevich; KEZLING, G.B., inzh., retsenzent;
FEDOROV, N.A., nauchn. red.; KUSKOVA, A.I., red.

[Mechanization of the manufacture of products for the
outfitting of ships] Mekhanizatsiya izgotovleniya sude-
vykh dostroechnykh izdelii. Leningrad, Sudostroenie,
1964. 179 p.
(MIRA 18:2)

NIKOLAYEV, Yevgeniy Vladimirovich; BOYNOVICH, D.I., inzh.,
retsenzent; KUZNETSOV, M.V., inzh., retsenzent; OSMINKIN,
Ya.M., nauchn. red.; KOMAROVA, N.K., red.

[Safety measures on shipyard sidings] Tekhnika bezopasnosti
na pod'ezdnykh putiakh sudostroitel'nykh predpriatii. Le-
ningrad, Sudostroenie, 1965. 54 p. (MIRA 18:3)

BOYNOVSKIY, A. A., inzh.

Unified methodology of determining the economic efficiency of
new technology in stoping. Ugol' 38 no.4:48-51 Ap '63.
(MIRA 16:4)

1. Gosudarstvennyy proyektno-konstruktorskiy i eksperimental'-
nyy institut ugol'nego mashinostroyeniya.

(Stoping(Mining)—Equipment and supplies)

CZECHOSLOVAKIA/Plant Diseases. Diseases of Cultivated Plants

0-3

Abs Jour : Ref Zhur - Biol., No 20, 1958, No 91958

Author : Blatnyy Brchak Ya., Linberk Ya., Boynyanskiy V.
Inst : -

Title : On the Problem of Epidemiology of Stolbur (*Chlorogenus austriensis* infection of Solanaceae: a common name for tomato big-bud virus infection) in Czechoslovakia, Particularly Stolbur in Potatoes.

Orig Pub : Folia biol. (Ceskosl.), 1956, 2, No 3, 181-190

Abstract : No abstract

Card : 1/1

BOINYANSKIY, Vit. [Bojnjansky, Vit].

Stolbur wilt and plant yellows in Czechoslovakia. Trudy Inst.gen.
no.23:321-325 '56. (MIRA 10:1)
(Czechoslovakia--Viruse diseases of plants)

Boynyanskiy, V.

CZECHOSLOVAKIA/General Biology - Physical and Chemical Biology

B-1

Abs Jour : Ref Zhur - Biol., No 3, 1958, No 9418

Author : Boynyanskiy

Inst : Not Given

Title : Effect of Cosmic Rays on Plants

Orig Pub : Ceskosl. biol., 1957, 6, No 2, 136-141

Abstract : In Vysoky Tatry on Lomnits Shchit (2640 m above sea level) and Veliky Lomnits (639 m above sea level) the descendants of one plant of local winter rye were sown in boxes. In Tatry, sprouts and germinations were subjected for a period of 18 days to intensive cosmic radiation, after which the experimental material together with the controls, which were developed in the same manner on Lomnits, were planted in soil in Lomnits, successfully wintered there, and were subjected to a comparative study. Increased variability was established for plants subjected to cosmic rays. Among the irradiated plants there were found some samples marked by different, evidently mutated types

Card : 1/2

BOYNYANSKIY, V. [Boinians'kyi, v.]

Potato canker from the ecologico-geographical point of view.
Mikrobiol. zhur. 22 no. 1:3-14 '60. (MIRA 13:10)

1. Iz laboratorii zashchity rasteniy Chekhoslovatskoy Akademii
sel'skokhozyaystvennykh nauk v g. Ivanka na Dunaye.
(POTATO WART)

SERYY, N.I.; BELEYY, G.V.; BOYPRAV, M.V.

Better organization of roadbed maintenance. Put' i put.khoz.
4 no. 5:7-9 Ny '60. (MIRA 13:11)

1. Zamestitel' nachal'nika sluzhby puti, g.Kishinev (for Seryy).
2. Nachal'nik mostoispytatel'noy stantsii, g.Kishinev (for Belyy).
3. Starshiy inzhener sluzhby puti, g.Kishinev (for Boyprav).

(Railroads--Maintenance and repair)

Boys, G.V.

PA - 2792

AUTHOR BOGORODITSKIY, N.P., BOYS, G.V.,
KOZLOVSKAYA, M.N., NEIMAN, M.I.,
TITLE Mechanical Strength of Radioceramics in Connection with Heat Treatment.
(Mekhanicheskaya prochnost' radiokeramiki v svyazi s termicheskoy
obrabotkoy - Russian)
PERIODICAL Zhurnal Tekhn. Fiz., 1957, Vol 27, Nr 4, pp 675-681, (U.S.S.R.)
Received 5/1957 Reviewed 6/1957

ABSTRACT The following three materials mainly used in radio industry were investigated. 1) Ultra porcelain UF-46 on a corundum basis. 2) Ticond T-8e on a rutile basis. 3) Ceramic material on a zirconium-titanate basis TK-2o. Crystal sizes were 4 and from 2 to 40 and from 10 to 15 respectively. Measurements of the temperature coefficients of capacity were carried out at a temperature of from 30-70° C and a frequency of 2.1×10^6 kc. The mechanical strength of radioceramics is closely connected with the forming of a boundary layer between the crystals. This layer has the capability of further crystallization, which leads to the forming of microgaps. Hardening of ceramics at temperatures above the critical temperature for forming gaps is of special importance for the purpose of increasing the mechanical strength. Mechanical and electric strength are closely connected with each other. On the account of the forming of microgaps the electric strength of the ceramics decreases by one order of magnitude. The ceramic materials investigated have a certain critical temperature for the forming of gaps which has to be taken into

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Mechanical Strength of Radioceramics in
Connection with Heat Treatment.

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account in the case of technological processes. In three chapters the influences exercised by temperature in annealing and cooling down on the properties of the samples are dealt with.
(16 illustrations and 4 citations from Slav publications).

ASSOCIATION

PRESENTED BY

SUBMITTED 1.11.1956

AVAILABLE Library of Congress

Card 2/2

DAYS, G.V.

247600 (1043410, 1025)

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B013/B03

ATTACHED:

Zakharov, I. I., Director, M. P., Zaraysk, L. M.
Zemskov, S. I., Sov. C. I.

TITLE:

Series of Chromatographic Study of Barium Titanate^{1/2}
Gor'kin Akademii Nauk SSSR, Seriya Finicheskaya, 1950,

PERIODICAL:

Vol. 21, No. 10, pp. 1234 - 1235.

TEXT: The authors studied the effect of commonly used additives upon the sintering process of barium titanate. These additives include BaCO_3 , BaCl_2 , TiO_2 , CaCO_3 , MgCO_3 , ZnCO_3 , etc. For this purpose, they made use of a complete thermal analysis which was conducted on an apparatus of the VPP-1000 type. Barium titanate was synthesized at 1200°C. The samples were produced by the conventional ceramic processes. The thermal analysis of barium titanate is shown in Fig. 1. The first exothermic effect appears at 1200°C and is related to the burning out of the plastic lattice. The second effect occurs at 1350°C and is due to the termination of the

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Production process of barium titanate. The endothermic effect observable at 810°C may be explained by the conversion of BaCO_3 contained in the material used. On the addition of TiO_2 and ZnCO_3 , two other thermal effects are visible in the temperature range 1200 - 1300°C: an endothermic effect on heating and an exothermic effect on cooling (Fig. 2). This is presumably due to the formation of an antielectric BaTiO_3 solid solution with titanates of higher mobility and their subsequent crystallization. An X-ray analysis performed by Yu. I. Gor'kin, on the system $\text{BaTiO}_3-\text{ZnCO}_3$ indicated the existence of a solid solution with a perovskite lattice. This fact indicates the presence of an excessive amount of titanate dissolved. The above-mentioned thermal effects are probably related to the presence of the form an exotropic melt. The authors also found that a composite that exists when sintering a material on the basis of barium titanate with the addition of TiO_2 and ZnCO_3 . In the presence of MgCO_3 , CaCO_3 , BaCO_3 ,

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and other additives, the thermal effects due to the presence of ZnO_2

K. K. Kilar and E. P. Karpin are mentioned. The present paper has read at the Third Conference on Dielectrics, which took place in Moscow from January 29 to 30, 1960. There are 3 figures and 2 references:

Card 3/3

X

DOYS, G. V.

1000

PHASE : BOOK INFORMATION

SOV/4379

Yezopryamya kifavetayya po fizike dielektrikov. 2d, 1958

Fizika dielektrikov: trudy vsesoyuznoy nauchnoy konferentsii [Physics of Dielectrics].
Moscow, Izd-vo Akad. Nauk SSSR, 1960. 552 p. Prints alip. Inserted. 5,000 copies
printed.

Sponsoring Agency: Akademija nauk SSSR. Fizicheskiy institut imeni P.N. Lebedeva.
Ed. of Publishing House, Tel. Novodevicheskaya, Tech. Ed., I.M. Dorschin; Eds.-
Editorial Board, (Sov. Ed.) G.I. Danilov, Doctor of Physics and Mathematics;
D.S. Sosulin, and L.T. Filippova, Candidate of Physics and Mathematics.

Purpose: This collection of reports is intended for scientists investigating
the physics of dielectrics.

Content: The Second All-Union Conference on the Physics of Dielectrics held in
Moscow at the Fizicheskiy institut imeni P.N. Lebedeva (Physical Institute imeni
Lebedeva) in November 1958 was attended by representatives of the principal
institutes conducting work on the physics of dielectrics. This collection
of papers contains most of the papers presented at this conference and summarizes
dielectric properties, losses, and polarization, and with specific interest
attention to various crystals, chemical compounds, and certain organic
compounds, ferroelectric crystals, and various radiation and irradiation
effects on dielectric materials investigated. The volume contains 1100 of other
papers presented at the conference dealing with polarization, losses, and
other areas of dielectrics which were published in the journal "Izv. Akad. Nauk SSSR, Ser. fiz.", and in "Zh. fiz. chern.", No. 10, 1959. No personalities are mentioned.

AUTHORS: I.M. Dorschin and I.S. Sosulin [editors]; L.T. Filippova [physicist]; A.M.
Korobkov [radiographic sensitivity]; Institute of Crystallography, AS
USSR, Moscow]

Discussion

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Authors: G.M. Vereshchagin and I.M. Podlubno, Effect of Heat Treatment
on the Dielectric Properties of Certain Alkali-Free Silicate
Glass

Ioffe, V.D. and I.S. Sosulin, Dielectric Properties of Certain Crystal
Luminophores [Institute of Metal Science, AS SSSR (Institute of Silicate
Chemistry), AS USSR]

Korobkov, F.A., Effect of the Sorption Shape of the Water Bond on the
Dielectric Properties of Organic Dielectrics

Korobkov, F.A., Dielectric Losses in Glass [Ed. 20]

Korobkov, F.A., Dielectric Properties of Conductive Crystals [Fizicheskiy
Institut imeni M.V. Lomonosova (Physical Institute imeni M.V. Lomonosova)
Institute imeni M.V. Lomonosova]

Korobkov, F.A. and I.M. Dorschin, Third Kind of Thermal Breakdown [Luminophore
and Photoconductor Components, University of Moscow, Lomonosov
Physic Division, Moscow State University, Lomonosov, Lomonosov]

Korobkov, F.A. and I.M. Dorschin, Third Kind of Thermal Breakdown [Luminophore
Components, Institute imeni M.V. Lomonosova (Physical Institute imeni M.V. Lomonosova)]

ZHUKOVSKIY, V.I.; DOROKHOVA, M.P.; ZAREMBA, N.Ye.; DYKMAN, D.G.; BOYS, G.V.

Data of the thermographic investigation of barium titanate with
some admixtures. Izv. AN SSSR Ser. fiz. 24 no.10:1294-1295 O '60.
(Barium titanate) (MIRA 13:10)

BOYSHEV, B.; IVANOV, R.

Stable osteosynthesis in fractures of the femoral neck. Ortop.
travm.i protez. 21 no.2:9-13 F '60.
(FEMUR-FRACTURE) (MIRA 13:12)

BOYSZA, Mikolaj

Children's rheumatism sanatorium in Wieniec-spa, a state health
resort. Reum. pol. 4:149-153 '61.
(RHEUMATISM) (HEALTH RESORTS)

WILKOSZEWSKI, Edward; BOYSZA, Mikolaj

Results of sanatorial therapy in Wieniec-Spa of children with rheumatic fever. Reumatologia (Warsz.) 1 no.3-4:245-251 '63.

l. Z Dziecięcego Sanatorium Przeciwgosccowego (Konsultant: prof. dr med. E. Wilkoszewski).

BOYSZA, Mikolaj

Behavior of the serum seromucoid content in children with
recognized rheumatic fever treated in a sanatorium. Reum
Pol. 2 no. 2:143-146 '64.

1. Z Dziecięcego Sanatorium Reumatologicznego Państwowego
Uzdrowiska w Wiencu-Zdroju Kujawskim (Konsultant: prof. dr
med. E.Wilkoszewski).

Doyte, I.

NEDELIUC, V.
SURNAME (in caps); Given Name

Country: Romania

Academic Degree: Veterinarian

Affiliation: Zootchnical Research Institute (Institutul de Cercetari Zootehnice).

Source: Bucharest, *Publiere Zootehnica si Veterinara*, No 6, 1961,
pp 45-49.

Data: "The Effect of Cobalt in the Fattening of Geese."

Co-authors:

DOYTE, I., Veterinarian, Enterprise for the Industrialization of Meat (Intreprinderea pentru Industrializarea Carnii), Salonta.
CORNU, C., Enterprise for the Industrialization of Meat (Intreprinderea pentru Industrializarea Carnii), Salonta.
EDOVACS, St., Enterprise for the Industrialization of Meat (Intreprinderea pentru Industrializarea Carnii), Salonta.

BOYTEKH, O., Cand Chem Sci -- (diss) "The Use of Some Alpha Hydroxy Acids for the Chromatographic Separation of the Radioactive Isotopes of Rare Earth Elements." Moscow, 1960, 11 pp, (Moscow Order of Lenin and Order of Labor Red Banner State Univ im M. V. Lomonosov, Chem Faculty, Chair of Inorganic Chem) 110 copies, no price given, (KL, 21-60, 118)

BOYTCEV, B., Prof. Dr. (Sofia, Bulgarie)

Results of surgical reduction of hip dislocation. Acta chir. orthop.
traum. czech. 26 no.5-6:494-495 1959.
(HIP, fract. & disloc.)

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206710005-0

BOYTCHEV, B. (Sofia)

Tunel arthrodesis of the hip. Acta chir. orthop. traum. czech. 27
no.2:147-149 1960
(HIP surg.)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206710005-0"

BOYTCHEV, B.

A new surgical technic in the treatment of club hand in the varus or valgus position. Acta chir.plast. 2 no.3:226-228 '60.

1. Institut de specialisation et de perfectionnement des medicins, Sofia 'Bulgarie). Clinique d'orthopedie et traumatologie, Sofia Directeur: Prof. B. Boytchev.
(HAND abnorm)

BOITKEVICH, A.A.

Among the Reports of the Academy of Sciences of the USSR, an article by BOITKEVICH, A.A. "Phenomena of the functional exhaustion of certain endocrine organs." (Endocrinology) is listed.

SO: Dokland Akademii Nauk SSSR, #9, Vol LI, 1946, Unclassified.

BOYKEVICH, A. A.

PA 69T71

USSR/Medicine - Endocrine Glands
Medicine - Light, Effect

Feb 1948

"Light and the Endocrine System," Prof A. A. Boykevich, 6 pp

"Priroda" Vol XXXVII, No 2

Author maintains that endocrine system, sex glands in particular, is affected by light and describes experiments on animals which lend support to this view. Greatest stimulus produced by orange and red rays and least by green. Length of daily exposure is more important factor than intensity of illumination.

69T71

BOYTKEVICH, B.A.

"The Most Recent Data On Vegetative Inheritance Of Variations Of Morphogenesis" (p.218)
by B.A. Boytkevich, G.V. Khomullo and E. Naumenko

SO: Journal of General Biology (Zhurnal Obshchei Biologii) Vol. XI, 1950, No. 3

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206710005-0

AVILOV, G. V. ; YUZHNAIA, D. M. ; BOYTLER, E. M. ; NAZAROV, S. Kh.

Magnetic tape for recording of moving images. Tekh.kino i telev.
4 no.9:14-20 S '60.
(MIRA 13:9)

1. Vsesoyuznyy nauchno-issledotel'skiy kinofotoisntitut i Shost-
kinskiy filial Nauchno-issledovatel'skogo kinofotoinstituta.
(Magnetic recorders and recording)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206710005-0"

S 4210 1043, 1273, 1145

21342

S/078/61/006/004/016/018
B107/B218

AUTHORS:

Ozerova, M. I., Boytler, E. M., Yegorova, Ye. I.

TITLE:

Study of solubility and solid phases in the system
 $(\text{NH}_4)_2\text{Fe}(\text{SO}_4)_2 - (\text{NH}_4)_2\text{Mg}(\text{SO}_4)_2 - \text{H}_2\text{O}$

PERIODICAL:

Zhurnal neorganicheskoy khimii, v. 6, no. 4, 1961, 966-970

TEXT: The present paper presents results of equilibrium studies in the system $(\text{NH}_4)_2\text{Fe}(\text{SO}_4)_2 - (\text{NH}_4)_2\text{Mg}(\text{SO}_4)_2 - \text{H}_2\text{O}$ at 25°C in the entire range of concentrations of the components. Besides, the thermograms of the double salts $(\text{NH}_4)_2\text{Fe}(\text{SO}_4)_2 \cdot 6\text{H}_2\text{O}$, $(\text{NH}_4)_2\text{Mg}(\text{SO}_4)_2 \cdot 6\text{H}_2\text{O}$, and of the isomorphous mixture $(\text{NH}_4)_6\text{Fe}_2\text{Mg}(\text{SO}_4)_6 \cdot 18\text{H}_2\text{O}$ are given. Based on the values obtained, the authors tried to calculate the coefficient of equilibrium distribution of magnesium ammonium sulfate as referred to iron ammonium sulfate, i.e.,

$$D_{\text{equ}}(\text{Mg}, \text{Fe}) = \frac{c_{\text{Mg sol}}}{c_{\text{Fe sol}}} : \frac{c_{\text{Mg liqu}}}{c_{\text{Fe liqu}}}$$

The above problem is of practical

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Study of solubility and solid phases...

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importance to the preparation of ferrites by thermal decomposition of iso-morphous mixtures. The initial substances were Mohr's salt (chemically pure) and magnesium ammonium sulfate obtained from ordinary sulfates (for analysis). The content of MgO was 10.98 % and theoretically, 11.11 %. Iron was titrated in sulfuric acid solution with KMnO₄. Magnesium in magnesium ammonium sulfate was determined as pyrophosphate by a method of I. M. Kol'tgov and Ye. B. Sendel. Ammonium sulfate was determined by distillation of NH₃ in a standard acid of given volume and concentration, and back-titration of the excess acid by 0.1 N NaOH. The refractive index was measured with an Abbé refractometer, while the specific gravity was determined with a pycnometer. From the values of Table 2 it may be seen that the composition of the solutions and solid phases in the system iron ammonium sulfate - magnesium ammonium sulfate - water are close to each other. For comparison, Table 1 gives the values obtained by J. Zweiglowna who investigated the system between 0 and 6°C (Ref. 4: J. Zweiglowna, Roczn. Chem. 4, 337 (1927)). The coefficient of equilibrium distribution is 1.40 at 0°C, and 1.34 at 25°C. Herefrom it follows that the distribution of isomorphous components among liquid and solid phases between 0°C

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Study of solubility and solid phases...

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and 25°C is only slightly dependent on temperature (Fig. 1). Thermograms were taken of the double salts iron ammonium sulfate and magnesium ammonium sulfate, and of the isomorphous mixture $(\text{NH}_4)_6\text{Fe}_2(\text{SO}_4)_6 \cdot 18\text{H}_2\text{O}$. For this purpose, the authors used the ПК-52 (PK-52) pyrometer at a weighed portion of 600 g and a rate of heating of 10°C/min, with a platinum-platinum-rhodium thermocouple. Iron ammonium sulfate forms light green crystals with a sp. gr. of 1.8743 and a refractive index of 1.4890. Analysis yielded 39 % of FeSO_4 , 33 % of $(\text{NH}_4)_2\text{SO}_4$, and 28 % H_2O . The thermogram shows 10 thermal effects. These effects are essentially the same as those of ordinary iron sulfate, but more complicated. The endothermic effects from 60 to 165°C correspond to the high loss of water of the salt. In the intervals of 308-312°C, 335-356°C, and 363-407°C, a further hydration and the beginning of ammonium separation were observed. The effects from 440 to 444°C, 462 to 473°C, 505 to 528°C, and 555 to 560°C have a higher position on the differential curve than has the zero line. They may be explained by oxidation of iron sulfate on the surface and simultaneous further dissociation of ammonium sulfate. 675 to 748°C corresponds to the dissociation of iron sulfate. Magnesium ammonium

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Study of solubility and solid phases...

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sulfate forms colorless, transparent crystals (sp. gr. 1.707; refr. ind. 1.474). Analysis yielded 33.33 % of $MgSO_4$, 36.66 % of $(NH_4)_2SO_4$, and 30 % H_2O . Eight thermal effects were found. From 80 to 572°C, these effects coincide with those of ordinary magnesium sulfate. At 667°C, an exothermic effect was established, which turned out a change in the crystal lattice of magnesium sulfate. The endothermic effects from 1028-1049°C and 1078-1141°C are the same as those found by A. I. Tsvetkov and Ye. P. Val'yashikhina (Ref. 8: Materialy po termograficheskemu issledovaniyu mineralov (Data on thermographic studies of minerals), Tr. in-ta geologicheskikh nauk, no. 157. Petrograficheskaya seriya (no. 45), 1955). The values indicate a polymorphous effect of transformation and the dissociation of magnesium sulfite. The crystals of the isomorphous mixture are bluish-green (sp. gr. 1.834; ref. ind. 1,487). Analysis yielded 49.65 % of $2(NH_4)_2Fe(SO_4)_2$, 22.62 % of $(NH_4)_2Mg(SO_4)_2$, and 28.32 % of H_2O . Ten thermal effects were found. Those between 71.4 and 535°C correspond to the double salts and ordinary sulfates. The discontinuity of the temperature curve at 506 to 510°C corresponds to the exothermic effect in the thermogram of magnesium ammonium sulfate. From 1028 to 1044°C, no

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polymorphous effect of transformation is observed. A decrease of the dissociation temperature was also found. The X-ray analysis by D. M. Kheyker showed that at 900°C the thermal decomposition of the polymorphous mixture leads to the formation of 100% magnesium ferrite. The authors thank K. G. Khomyakov for advice. There are 4 figures, 2 tables, and 8 references: 7 Soviet-bloc.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
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State University imeni M. V. Lomonosov, Chemical Division,
Department of General Chemistry)

SUBMITTED: February 12, 1960

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Study of solubility and solid phases...

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Legend to Tables 1 and 2: 1) Specific gravity of the solution, g/cm³; 2) salt content of solutions in equilibrium, wt%; 3) content of salt in the solid phase; 4) D_{equ}; 5) refractive index; 6) in the solution; 7) in the salt mass.

Уд. вес р-ра, г/см ³	Содержание солей в равновесных р-рах, вес. %				Содержание солей в твердой фазе		Равн. (Mg,Fe)	
	(NH ₄) ₂ Fe(SO ₄) ₂		(NH ₄) ₂ Mg(SO ₄) ₂		(NH ₄) ₂ Fe(SO ₄) ₂	(NH ₄) ₂ Mg· (SO ₄) ₂		
	в р-ре ②	в солевой массе ③	в р-ре ④	в солевой массе ⑤				
1,1435	10,70	—	—	—	100	—	—	
1,1174	6,8	36,01	41,37	62,98	31,31	68,67	—	
1,1248	9,12	46,72	10,40	53,28	41,04	58,96	1,28	
1,1246	11,50	60,30	7,57	39,70	52,25	47,75	1,25	
1,1333	14,10	67,40	6,80	32,54	50,12	40,88	1,39	
1,1355	14,62	70,69	6,00	29,31	63,84	36,73	1,42	
1,1419	17,84	81,42	4,17	18,58	71,48	28,52	1,38	
1,1048	—	—	10,06	—	—	100	1,70	

Table 1

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Уд. вес. р-ра, г/см ³	Понижа- тель пре- поминки	Содержание солей в равновес- ных р-рах, вес. %				Содержание солей в твердой фазе, вес. %			$D_{\text{равн}}$ $\frac{M}{(Mg, Fe)}$	
		(NH ₄) ₂ Fe(SO ₄) ₂		(NH ₄) ₂ Mg(SO ₄) ₂		(NH ₄) ₂ Fe(SO ₄) ₂		(NH ₄) ₂ Mg(SO ₄) ₂		
		в р-ре	в солевой массе							
1,2018	1,3843	23,32		0,00		100,00				
1,1532	1,3760	5,85	29,45	14,01	70,54	20,16		73,82		1,48
1,1590	1,3768	8,31	41,90	11,62	58,10	37,60		62,39		1,29
1,1752	1,3797	12,26	57,24	9,22	42,62	53,78		40,21		1,14
1,1798	1,3806	16,84	71,18	6,17	26,81	65,84		34,13		1,41
1,1810	1,3810	17,50	74,59	5,34	25,41	69,64		30,33		1,42
1,1912	1,3730	—	—	10,80	—	—		100,00		

Table 2

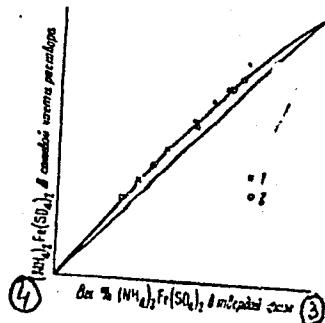
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Study of solubility and solid phases...

Fig. 1: Diagram of the distribution of the components. Legend: 1) at 0°C; 2) at 25°C; 3) $(\text{NH}_4)_2\text{Fe}(\text{SO}_4)_2$ is the solid phase, wt%; 4) $(\text{NH}_4)_2\text{Fe}(\text{SO}_4)_2$ in the salt fraction of the solution.



Card 6/8

BOYTMAN, Yu., red.; VORONINA, V., tekhn. red.

[Leningrad; views of the city] Leningrad; vidy goroda. Moskva,
Gos. izd-vo izobraz. iskus., 1960. 1 v. plates.
(Leningrad--Views)

BOYTSEKHOVSKIY, A. K.

Boytsekhovskiy, A.K. "Concentration of kaolins in the USSR," in symposium; Syr'yevyye resursy tonkoderam, prom-sti SSSR i puti ikh ispol'zovaniya, Moscow-Leningrad, 1948, p. 249-56

SO: U-2888, Letopis Zhurnal'nykh Statey, No. 1, 1949

BOYTSSEL', Z. A.

AGRANOVSKAYA, I.A.; ASATKLINA, Ye.P.; BOYTSOVA, Ye.P.; BOCHARNIKOVA, A.D.;
~~BOYTSSEL', Z. A.~~; IVANOVA, Ye.A.; KALASHNIKOVA, V.A.; KLIMKO, S.A.;
KRUCHININA, N.V.; MALYASOVA, Ye.S.; MARKOVA, L.G.; MARTYNova, Z.I.;
POKROVSKAYA, I.M.; POLUKHINA, V.A.; ROMANOVSKAYA, G.M.; SAMIGULINA,
Ye.P.; SEDOVA, M.A.; SIGOVA, N.N.; STEL'MAK, N.K.; PERLIN, S.S., re-
daktor izdatel'stva; GUROVA, O.A., tekhnicheskiy redaktor.

[Atlas of Oligocene spore and pollen complexes in various regions of
the U.S.S.R] Atlas oligotsenovykh sporovo-pyl'tsevых kompleksov
razlichnykh raionov SSSR. Moskva, Gos.nauchno-tehn.izd-vo lit-ry
po geologii i okhrane nedr. 1956. 312 p. (Leningrad, Vsesoyuznyi
geologicheskii institut. Materialy, no.16) (MLRA 10:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskii institut
Ministerstva geologii i okhrany nedr SSSR. (for Asatkina, Boytsova,
Kalashnikova, Kruchinina, Pokrovskaya, Romanovskaya, Sedova, Stel'-
mak). 2. Yuzhno-Ural'skoye geologicheskoye upravleniye (for Sigova)
3. Ural'skoye geologicheskoye upravleniye (for Agranovskaya, Bocharni-
kova, Martynova, Polukhina, Samigulina). 4. Trest "Zapsibneftegeologiya"
(for Boytsel', Ivanova, Klimko, Markova). 5. Geograficheskiy fakul'tet
Leningradskogo gosudarstvennogo universiteta (for Malyasova)
(Pollen, Fossil) (Spores (Botany), Fossil)

BOYTSEVA, Yekaterina Pavlovna; GRIBANOV, N.N., red.; FREGER, D.P.,
red. izd-va; BELOGUROVA, I.A., tekhn. red.

[Mechanization of paper box making; from practices of the
Leningrad "Severnoe sianie" perfume factory] Mekhanizatsiya
kartonazhnogo proizvodstva; iz opyta leningradskoi parfiu-
mernoj fabriki "Severnoe sianie." Leningrad, 1962. 32 p.
(MIRA 15:9)
(Leningrad--Cartons)

Boysik, L.P.

7

S/169/61/000/011/027/065
D228/D304

AUTHORS: Alekseyev, F.A., Yerozolimskiy, B.G., Bespalov, D.P.,
Bondarenko, L.N., Boysik, L.P., Popov, N.V.,
Khaustov, A.I., Romanovskiy, V.F., Shimelevich, Yu.S.
Shkol'nikov, A.S., and Yudin, L.I.

TITLE: The result of applying neutron impulse methods and
apparatus for investigating borehole logs

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 11, 1961, 34,
abstract 11A304 (V sb. Yadern. geofiz. pri poiskakh
polezn. iskopayemykh, M., Gostoptekhizdat, 1960, 3-20)

TEXT: A borehole impulse generator of neutrons is described together with the method of impulse-neutron neutron-logging (INNL). A description is given for the electronic layout of the borehole generator of neutrons and the surface apparatus for impulse neutron logging. During laboratory tests of the generator a stable mean neutron yield of $\sim 2 \times 10^7$ neutr./sec. was obtained at 100 kv. of accelerating voltage in the tube. The impulse duration amounted to 100
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The result of applying neutron ...

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usec, the transmission frequency being 400 c/s. The neutron generator was used in the commercial testing of INNL. INNL readings against oil-bearing beds exceed by 10 times those for aquiferous beds containing mineralized water, at a delay time of 1000 psec. Certain impediments and limitations of thermal impulse neutron-logging in different oil- and water-saturated beds are indicated, and the requirements for the apparatus are stated. Further prospects are indicated for the application of impulse neutron generators. [Abstractor's note: Complete translation].

Card 2/2

BOYTSOV, A. (s. Magor'ye, Yaroslavskoy oblasti)

Wind-generator mast that can be lowered. Radio no. 6:47 Je '56.
(Windmills) (MLRA 9:8)

BOYTSOV, A. (s.Nagor'ye, Yaroslavskoy oblasti).

Modification of the G-21 truck generator for use in a wind power
station. Radio no.6:47 Ju '56. (MLRA 9:8)
(Electric generators) (Windmills)

L-08106-67 EWP(m)/EWT(d)/EWT(m)/EWT(f) WE

ACC NR: AP6027445

(A)

SOURCE CODE: UR/0259/66/000/007/0020/0021

AUTHOR: Kondrat'yev, L.; Kalitkin, ...; Boytsov, A.

45
13

ORG: Scientific Research Institute of Civil Aviation (Nauchno issledovatel'skiy institut grazhdanskoy aviatsii)

TITLE: New application for aircraft engines

SOURCE: Nauka i tekhnika, no. 7, 1966, 20-21

TOPIC TAGS: turboprop engine, airfield clearing, airfield maintenance equipment, agricultural machinery, AIRCRAFT ENGINE / AI-20 TURBOPROP ENGINE

ABSTRACT: The Riga Gas-Turbine Engine Laboratory, headed by Candidate of Technical Sciences A. Dobrokhotov, has developed new applications for used AI-20 turboprop aircraft engines. These engines, which produce high temperatures and high-velocity airstreams, are utilized in different branches of the national economy. The AI-20 engines are used in agriculture to dry grain, corn, cotton, wool, and other agricultural products. At airports they are used to clean snow, ice, and rubbish from flight lines, platforms, and taxiways and to deice aircraft. The AI-20 engines are placed on special racks on D-452 tractors or APK-6V airport trucks. They are used as power plants for driving mobile electric power stations and as compressor units in the oil- and gas-mining industries. Operating on kerosene or diesel fuel, the electric power stations produce 600 to 800 kw of electricity. Orig. art. has: 3 figures

SUB CODE: 21, 01/ SUBM DATE: none

[WH]

Card 1/1 nice

BOYTSOV, A.A., inzh.; ONUFRIYEV, Yu.V., inzh.; REZNIKOV, B.S., inzh.;
ROMANENKO, F.D., inzh.

Device for regulating the direction of the motion of rock drills.
Ugol'.prcm. no.4:63-67 Jl-Ag '62. (MIRA 15:8)

1. Donetskiy nauchno-issledovatel'skiy ugol'nyy institut.
(Rock drills)

BOYTSOV, A.A., inzh.; REZNIKOV, B.S., inzh.

Controlling the direction of holes by the method of rope
lengths. Sbor. DonUGI no. 31:49-61 '63. (MIRA 17:10)

ARKHIPOV, A. S.; BOYTSOV, A. N.; MARCHENKO, Ye. N. (Moskva)

Pollution with toxic substances in the atmosphere of chemical factories. Gig. truda i prof. zab. no.1:3-8 '62.
(MIRA 15:2)

1. Institut gigiyeny truda i profzabolevaniy AMN SSSR.

(AIR--POLLUTION)

BOYTSOV, A. N.

PA 50/49T13

USSR/Aeronautics, Military
Radio - Training Devices

Apr 49

"Equipment for Simulating Flight Communications on
the Ground" 1 p

"West Vozdush Flota" No 4

Ground training is essential to proper functioning
of radio operators assigned to fighter and ground
attack groups. Training equipment was designed by
Maj A. N. Boytsov and consists of two parallel
operating type GS-1000 or GSX-1500 generators acti-
vated by a L-6/3 motor. Circuit operates on 26.5
to 28.5 volts. Type 12-KO-55 storage battery is

50/49T13

USSR/Aeronautics, Military (Contd)

Apr 49

used. No information as to specific operation of
system. Diagram shows disposition of circuit and
planes for training purposes.

50/49T13

KHRAMTSOV, N.G.; LYABIN, V.P.; BOYTSOV, A.N., kandidat tekhnicheskikh nauk,
redaktor.

[Working tolerances for smooth gauges] Ispol'nitel'nye razmery gladkikh
kalibrov. Pod red. A.N.Boitsova. Leningrad, Gos. nauchno-tekhn. izd-vo
mashinostroit. lit-ry [Leningradskoe otd-nie] 1953. 350 p. (MLRA 6:10)
(Gauges.)

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206710005-0

MYAGKOV, V.D.; KUTAY, A.K., kandidat tekhnicheskikh nauk, retsensent;
BOITSOV, A.N., kandidat tekhnicheskikh nauk, redaktor; DEUGO-
KANSKAYA, Y.G.A., tekhnicheskiy redaktor.

[Tolerance and fit; handbook] Dopuski i pasadki; spravochnik.
2-e izd., perer. i dop. Moskva, Gos. nauchno-tekhn. izd-vo mashino-
stroit. i sudostroit. lit-ry, 1954. 367 p. (MIRA 7:10)
(Tolerance (Engineering)) (Machine-shop practice)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206710005-0"

ABADZHI, K.I.; BOYTSOV, N.; VOLOSEVICH, F.P.; GOBERMAN, P.N.; KUTAY, A.K.;
MARINSKIY, F.I.; ODING, G.A.; RUBINOV, A.D.; SHTYURMER, G.A.;
BRZHEZINSKIY, M.L., kandidat tekhnicheskikh nauk, retsenzent; PETROV,
V.I., inzhener, retsenzent; KEMPINSKIY, M.M., inzhener, redaktor;
LEYKINA, T.L., redaktor izdatel'stva; POL'SKAYA, R.G., tekhnicheskiy
redaktor

[Reference manual for production control in machine building] Spravochnik po proizvodstvennomu kontrolu v mashinostroenii. Pod obshchei red.
A.K.Kutai. Moskva, Gos. nauchno-tekh. izd-vo mashinostroit. lit-ry.
1956. 670 p.
(Machinery industry)

BOYTSOV, Aleksandr Nikolayevich, dots., kand. tekhn. nauk; VOL'PE, L.,
red.

[Fundamentals of interchangeability and technical measurements] Osno-
vy vzaimozameniaemosti i tekhnicheskie izmerenia. Leningrad, Severo-
Zapadnyi zaochnyi politekhn. in-t. No.4. [Gauges] Kalibry; pis'mennye
lektssi. 1960. 103 p. (MIRA 14:11)
(Gauges)

ABADZHI, K.I.; BOYTSOV, A.N.; VOLOSEVICH, F.P.; GOBERMAN, P.N.;
KEMPINSKIY, M.M.; KUTAY, A.K.; NARINSKIY, F.I.; ODING,
G.A.; TAYTS, B.A.; RUBINOV, A.D.; SHTYURMER, G.A.;
BRZHEZINSKIY, M.L., kand. tekhn. nauk, retsenzent;
SHALAYEVSKIY, O.V., red.; LEVKINA, T.L., red.izd-va;
SPERANSKAYA, O.V., tekhn. red.

[Handbook on production control in the machinery industry]
Spravochnik po proizvodstvennomu kontroliu v mashinostro-
enii. Izd.2., perer. i dop. Moskva, Mashgiz, 1964. 748 p.
(MIRA 17:3)

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206710005-0

ABADEHI, K.I.; BOYTSOV, A.N.; GREYM, I.A.

Reviews and bibliography. Priborostroenie no.6:28-29 Je '64.
(MIRA 18:3)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206710005-0"

BOYTSOV, A. S.

Boysov

S/120/62/000/004/006/047
E039/E420

246730

AUTHORS: Malyshov, I.F., Popkovich, A.V., Roshal', G.Ya.,
Zheložnikov, F.G., Lysov, A.V., Tsepakin, S.G.,
Solnyshkov, A.I., Boytsov, A.S., Astakhov, Yu.Ya.,
Mironov, B.V., Lapitskiy, Yu.Ya., Batalin, V.A.,
Khoroshikov, V.S.

TITLE: The electrostatic accelerator - Injector of the proton
synchrotron

PERIODICAL: Pribory i tekhnika eksperimenta, no.4, 1962, 37-45

TEXT: An electrostatic accelerator used as an injector in the
7.0 Gev proton synchrotron developed in 1956 by NIIEFA is
described. The pressure chamber is 2200 mm in diameter and
7400 mm high and is intended for working pressures of up to
16 atm. Insulating gas is N₂:CO₂ mixture with a ratio of partial
pressure of 3:1. The main column is of conventional segmented
construction using polymethylmethacrylate. Values of the
dependence of the voltage produced on the gas pressure shows that
4 MV is obtained at 6.5 atm and 5.7 MV at 16 atm and a relative
humidity of < 1%. The charge transporter belt is a six layer

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E039/E420

The electrostatic accelerator ...

fabric driven by a 3000 rpm 10 KW motor at 20 m/sec. The accelerating tube and its electrode system is described in detail: it is 300 mm inner diameter with 44 segments and the residual pressure is $2 \text{ to } 5 \times 10^{-6}$ mm Hg. A Penning type discharge is used in the ion source which provides 0.3 mA total ion current on continuous operation or 20 mA pulsed; the proton component being 10 to 12% and 65% respectively. The energy of the injected particles is stabilized to about 0.1%. Results of operation in 1960-61 show that beam currents of 4 to 5 mA are obtained at 4 MV. There are 10 figures and 1 table.

ASSOCIATIONS: Nauchno-issledovatel'skiy institut elektrofizicheskoy apparatury GKAE (Scientific Research Institute for Electrophysical Apparatus GKAE)
Institut teoreticheskoy i eksperimental'noy fiziki
GKAE (Institute of Theoretical and Experimental Physics GKAE)

SUBMITTED: April 6, 1962

Card 2/2